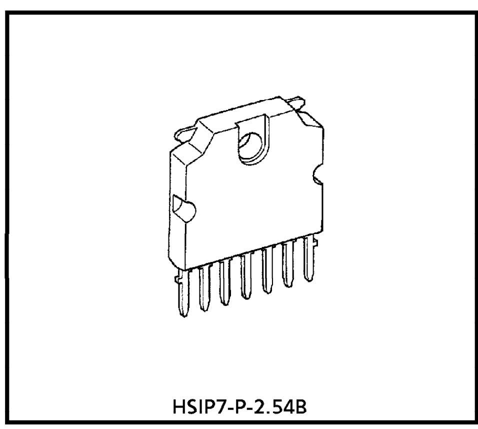
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA8403K

POWER AMPLIFIER FOR DRIVING A DEFLECTION CIRCUIT OF A COLOR TELEVISION

TA8403K is a power amplifier for driving a vertical deflection circuit of a small and medium screen size color television. TA8403K is available for constructing a stable deflection circuit with small number parts in an application with a single chip signal processing IC TA8879N.


HSIP7-P-2.54B

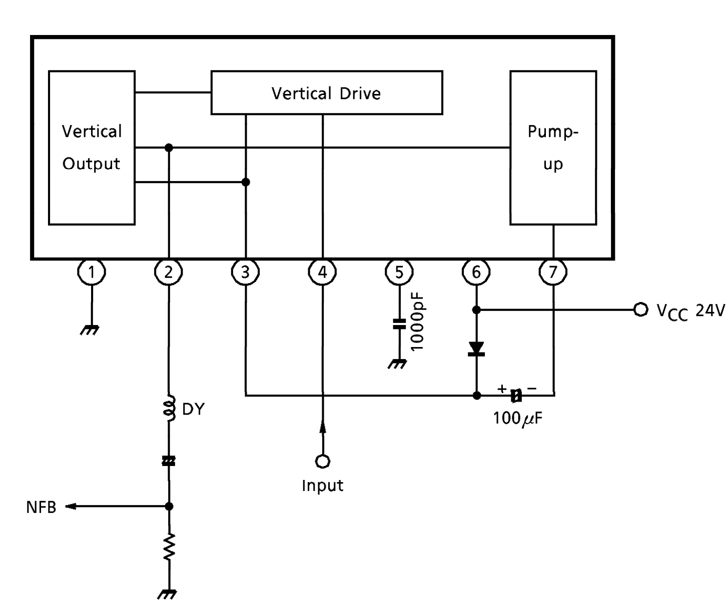
Weight : 0.7g (Typ.)



FEATURES

- Large output current : 1.8Ap-p (Max.)
- Small power dissipation with a pump-up circuit
- Small number external parts

BLOCK DIAGRAM



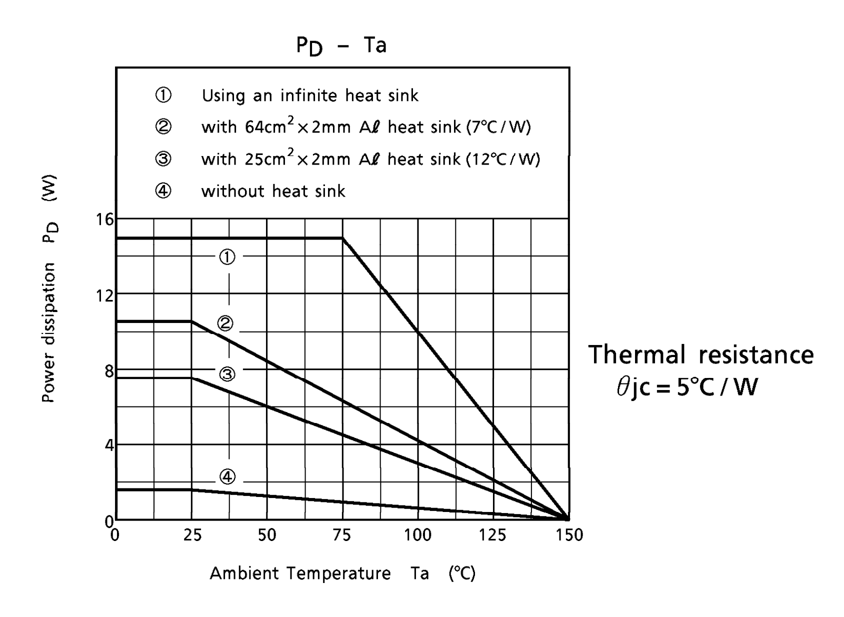
TERMINAL NAME

1. GND
2. Vertical Output
3. Pump-up Power Supply
4. Input
5. Phase Compensation
6. Power Supply
7. Pump-up Output

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Supply Voltage	V_{CC}	30	V
Pump-up Power Supply Voltage	V_{Vt}	60	V
Terminal Voltage	E_{in}	GND − 0.3 ~ V_{Vt} + 0.3	V
Input Signal Voltage	e_{in}	0~1.2	V
Power Dissipation	P_D	15 (Note)	W
Operating Temperature	T_{opr}	−20~85	°C
Storage Temperature	T_{stg}	−55~150	°C

(Note) Using an infinite heat sink



Thermal resistance
$\theta jc = 5°C / W$

RECOMMENDED OPERATING CONDITION

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT
Power Supply	V_{CC}	—	24	27	V
Deflection Output Current	$I_{2p\text{-}p}$	—	—	1.8	$A_{p\text{-}p}$

ELECTRICAL CHARACTERISTICS (Ta = 25°C, V_{CC} = 24V)

CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Saturation Voltage of the Vertical Output Transistor (1)	$V_{v\ (sat)\ 1}$	1	(Note 1)	0.3	0.5	1.0	V
Saturation Voltage of the Vertical Output Transistor (2)	$V_{v\ (sat)\ 2}$	1	(Note 2)	1.0	1.8	3.6	V
Saturation Voltage of the Pump-up Output Transistor (1)	$V_{p\ (sat)\ 1}$	1	(Note 3)	1.0	2.0	3.0	V
Saturation Voltage of the Pump-up Output Transistor (2)	$V_{p\ (sat)\ 2}$	1	(Note 4)	0.3	0.8	1.6	V
Output Current with no input	I_b	1	(Note 5)	10.0	15.0	30.0	mA
Center Output Voltage	V_{center}			10.0	12.0	14.0	V

(Note 1) SW_1 : ON, SW_2 : C, SW_3 : ON, SW_4 : B, SW_5 : A, SW_6 : A
Measure the voltage of pin2.

(Note 2) SW_1 : ON, SW_2 : C, SW_3 : ON, SW_4 : A, SW_5 : A, SW_6 : B
Measure the voltage of pin2, V_2. $V_{V\ (sat)\ 2} = V_{CC} - V_2$

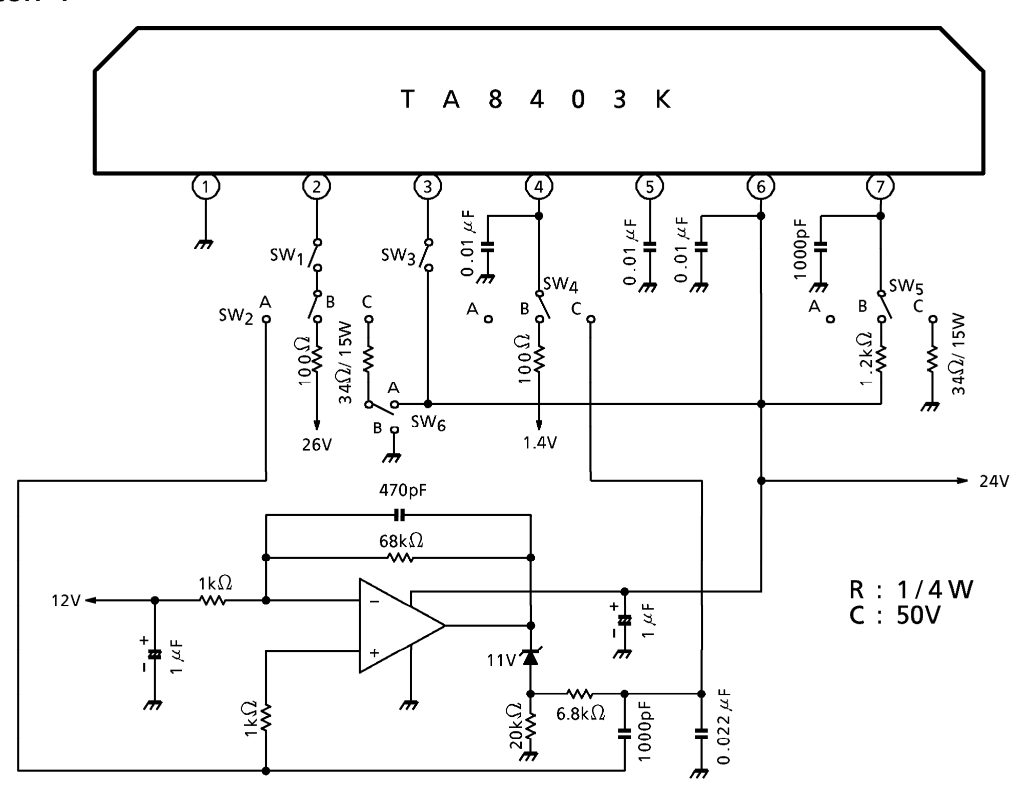
(Note 3) SW_1 : ON, SW_2 : B, SW_3 : OFF, SW_4 : A, SW_5 : C, SW_6 : A
Measure the voltage of pin7, V_7. $V_{P\ (sat)\ 1} = V_{CC} - V_7$

(Note 4) SW_1 : OFF, SW_2 : C, SW_3 : OFF, SW_4 : A, SW_5 : B, SW_6 : B
Measure the voltage of pin7.

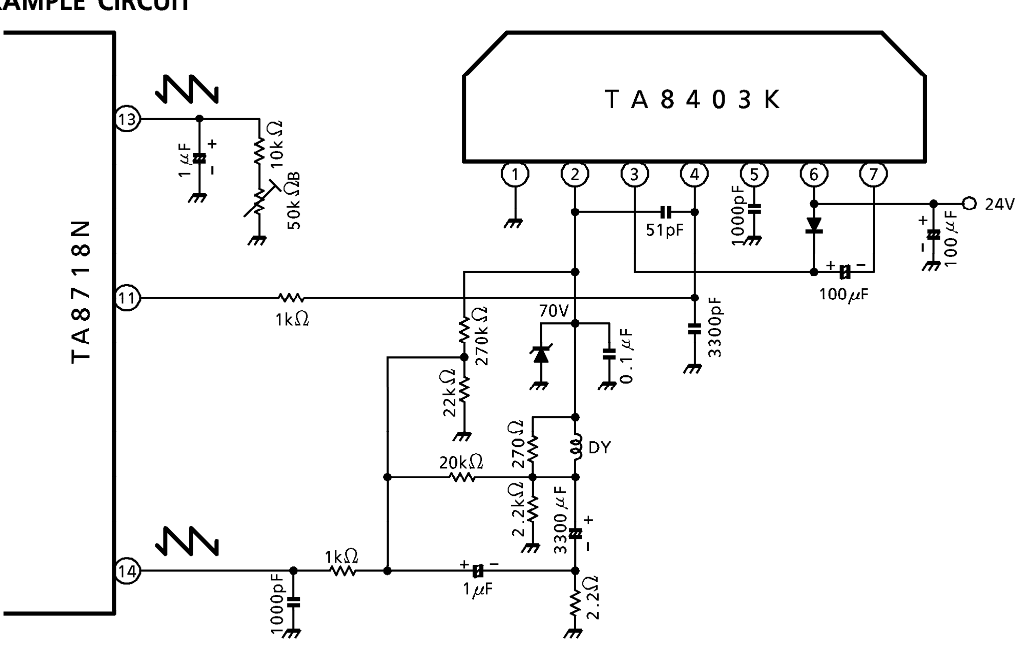
(Note 5) SW_1 : ON, SW_2 : A, SW_3 : ON, SW_4 : C, SW_5 : A, SW_6 : B
Measure the sink current into pin3.
Measure the voltage of pin2.

(Note 6) TA8403K is checked its output wave form in a real operating circuit.

TEST CIRCUIT 1



APPLICATION EXAMPLE CIRCUIT



OUTLINE DRAWING

HSIP7-P-2.54B

Unit : mm

Weight : 0.7g (Typ.)